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STRAWBERRIES—SOIL, CULTURE, AND VARIETIES.

After so complete a record of Strawberries as Mr. Fuller has given in his "Small Fruit Culturist," just published, it may be counted as presumption to write another word; but we have two reasons for so doing. One is, that all our readers may not buy and read Mr. Fuller's book; the other, that it is a duty devolving on us, as editors and publishers of a leading, or we may say *the* leading and oldest, horticultural journal, with one exception, in the States, to record from time to time our views of progress, and assert any ideas we may entertain, even although they run counter to some of our best writers.

An observation and practice of over thirty years convinces us that Mr. Fuller is right when he says: "No one kind of soil is equally well adapted to every variety;" but we may go further, and say that while this is correct, yet due preparation of a soil will adapt it to more varieties than perhaps would otherwise be accredited to it. And while a deep rich sandy loam may be called "the best soil, all things considered," we have our doubts if it be so, when stronger and more clayey soils have been perfectly prepared. With Mr. Fuller again we agree, that not one acre in a thousand in this country is properly prepared. We know of and have recently been over perhaps one hundred acres of vines, and not an acre among them had anything more in the way of preparing the ground than is given by our most slovenly farmers in preparing land for corn. And again, field after field that we have visited had received but one partial cultivation and hoeing this spring, and as the berries commenced ripening, grass, sorrel, and weeds were the leading features of growth that at a first glance met the eye. One little patch of ground, of about one-quarter acre, which we visited, had last fall been thoroughly prepared, first by deep plowing and subsoiling, and at the same time covering under a good dressing of manure. Then when planting came, the ground was furrowed out by a one-horse plow, run twice in the furrow, turning it each way, and as deep as the horse could draw it; then in the bottom was spread a layer of half-rotted stable manure, the soil turned back again, raked down smooth, and the plants set out, some the last of July, and some the last of August, all runners kept off; and as winter came on, say about the 20th November, the ground was mulched two inches deep with tan-bark. Up to the time of blooming this spring, the bed was

gone over, and every runner that showed was pinched back. The result is, that a show of fruit and a perfect ripening thereof greeted the owner, fully repaying and overpaying for all care and labor. The proprietor proposes, as soon as the fruiting time is over, to rake off his tan-bark, mulch, and then run a subsoil-plow between his rows as deep as he can; then let runners be guided into the intervening distance, but only just enough to re-form his bed, and as soon as they are established, put spades and Paddies to turning under the old plants—then rake down the whole smooth, keep it hoed, and again in November put on his mulch.

With such preparation of ground we believe many kinds of strawberries that now only receive rough culture, and still rougher comments on their values, might be shown to be almost as desirable as their originators deemed them. At any rate, we must urge on all who are about to make new strawberry beds, a remembrance that soil, provided it is not a stiff, hard, yellow clay, is not so absolutely important as the preparation thereof, and that while we have recorded a case where manure was used, and profitably, it is not always a requisite, as many of our rich, deep loamy prairie grounds and river bottom lands would be rather injured than benefited thereby, or, in other words, the manure would be a useless expense and trouble. Understanding the general principles, or that the strawberry roots deep, good common sense must then guide as to the condition of the soil, and its want of manure or otherwise.

And now one word about plants, and the time of setting. While we prefer the spring, because naturally that is the growing season, there is no difficulty in forming good beds or plantations of strawberries in August or September, provided the ground is thoroughly prepared and the plants come to hand in good order. If the plants are in your own grounds, and you have only to remove two hundred feet or so, then, of course, you can keep the roots from drying, and prevent exhaustion thereof, as you should do by clipping off all the fully developed leaves; but if you are to obtain your plants from a distance, bargain first that the dealer shall either take them up early in the morning, or on a cloudy day, that he shall clip away all the fully developed foliage, and finally, that every root shall be packed with moss next it—not a bundle put up and a little moss and grass or hay on the outside. We have had plants by mail, in packages, and in many ways, and when one understands just how to manage them, most can be saved; but when plants are received and then turned over to a common laborer to plant out, the buyer had better pay double price for his plants packed as we have described, than receive them gratis in the ordinary manner. Nurserymen and plant-growers have run the price of plants down to a nominal sum, hardly paying for the labor of digging. Let them now either charge for the packing or else add to the price of plants.

Having received the plants, the careful cultivator will take each plant singly, and with a pair of shears clip all brown, or dead, or broken roots back to fresh, clean fiber. Mr. Fuller advises taking a bunch in hand and cutting all at one clip; but while this may do for large plantations, or varieties of little cost, whoever has a choice plant had best examine its roots and cut away only such as are brown or injured.

When planting, after the ground is all ready, a horse and light one-horse plow run along the line and opening a furrow will much facilitate the work, and enable the planter to spread his roots well and rapidly. The iron rake afterward passed along will rapidly level in the furrow.

System—Hills or Rows.—On this point we do not think cultivators or writers differ much in reality, although they occasionally write pretty strongly in favor of their own views; but after all, as the strawberry of all sorts, except some of the Alpines, propagates by runners, if new plants can be established in the ground to pro-

duce well the next season, and the ground be well prepared and cultivated, it seems a little of tweedledum and tweedledee whether they are grown one plant to every six or ten inches in a row, and the rows three feet apart, or grown three or four offshoots or suckers from the old plant, in a stool or circle, each circle being two and a half or three feet each way apart.

If a new variety is on hand, from which you wish to obtain as many plants by runners as possible, let us say that pegging down and covering with earth is not as good as laying the runner just a trifle in the ground, and over it, at the junction where the plant bud is to burst, laying a flat stone. The stone retains a moisture and cool temperature to the root better than any mulching or shading in any other way which we have tried.

FIG. 100.—*Mead's Seedling.*

Having said so much on soils and cultivation, let us, before describing some of our leading and most desirable established varieties, say one word about sexuality. Many years since the subject was pretty thoroughly ventilated in the pages of this journal, and we who now write then wrote. It was then contended by some that all native or wild plants were self-impregnating or hermaphrodite, and that staminate blossoms would give no fruit alone, and versa pistillate. Others, of course, took opposite grounds. Having looked at and studied the subject, as we think, pretty thoroughly, we incline to the belief that nature ordered the form about right, and that while she has given to most of her wild plants a double sexuality, she has at times produced plants deficient in the double organs, but so constituted that they produce fruit in an imperfect form, but only a semblance of seeds; or, in other words, berries from a strictly pistillate plant, grown by itself, will not produce perfect seeds that will

mature and grow again. We have tested those counted as strictly pistillate and staminate, and have procured fruit from both, but in the first never the quantity obtainable, or in perfection as when associated with plants having stamens, and in the latter never to regard a staminate as of any value except as an impregnator. The varieties of the strawberry have now become so numerous that, as Mr. Fuller says, to describe them all would make a book too large for any one publisher who expected ever to receive back the amount expended on its publication. We therefore choose here only to figure and describe some of the more recently introduced sorts that have shown favorably in our own grounds, and are spoken well of by other growers.

MEAD'S SEEDLING.—Although some years before the public, this variety has not received much favor, and perhaps in light soil it is deficient; but under high culture it is a good grower, with a quite handsome berry, firm and good for market. The flowers are pistillate, leaf roundish and scoriated, as see our outline; the fruit stems are strong, and some plants we had filled well with fruit, which was of good size, conical rounded, bright scarlet in color, and the seeds prominent.

MCAVOY'S SUPERIOR.—This old berry, the prize plant of the Cincinnati Horticultural Society some years since, yet keeps, with us, of the highest flavor, our soil in which it is grown being a strong clay. It is pistillate, and rarely do we get perfect form or regular fruit. We have the same variety received as Buffalo, and in the garden of one of our friends it is growing under the name of General McClellan.

MONITOR, with us, is so poor a grower that we fear it must be an error, although in other respects it corresponds with the description of its originator.

METCALF'S EARLY, of which so much has been said West, we have growing, but the plants came so late, and not having grown quite strong, we do not desire to speak, as yet, in its favor.

TRIOMPHE DE GAND is with us, as yet, one of the most hardy plants and best fruiters of the foreign varieties. In deep strong soil, and with good cultivation, it certainly is a most desirable variety for the private garden, notwithstanding its peculiar flavor, by some admired, by others disliked. The leaf is broad and thick, quite rounded in form, with round serratures, as see our outline. The trusses of fruit are abundant, with strong stems, bearing fruit not quite uniform in shape, large, bright crimson, glossy, appearing almost as if varnished. It is hermaphrodite, or a self-impregnator.

LA CONSTANTE, which yet receives the favor of Mr. Hovey, at Boston, is with us a fine flavored fruit, but the vines require great care to retain in good health and vigor. If we neglect to cover them in winter, or cover them a little too deep, we lose them.

EMMA is a plant of good habit, and the few we have of it promise so well that we shall cultivate it another season. The fruit is bright scarlet, good form, a self-impregnator.

VICTORIA we have occasionally grown large, but it has again quite disappointed us, and unless we were going to try for a show berry of half a dozen specimens, we do not now think we would grow it.

JUCUNDA.—Although in high culture a good bearer, under ordinary care this is a variety that will fail to meet the expectations of many growers who have bought and planted it upon the reputation given it by some writers. It is a good-sized berry, and of fine color, pretty firm, and of good (not high) quality. The vines, however, are liable to suffer, and, like La Constante, only not so bad, die away and are gone.

VICOMTESSE HERICART DE THURY we have seen several years, but until this year have not ourselves grown it. It is a large berry, of fine flavor, and growers who have tested it, and with whom we have examined it, speak highly of it as one of the best of the foreign sorts.

LADIES' FINGER, or *Lady Finger*, is one of the best among the early ripening hardy varieties, a self-impregnator, producing abundantly fruit variable in form and size, but all smooth and regular, firm enough to carry well to market, of a bright dark scarlet color, and quality good. It has been a long time grown in New Jersey, but is not much known at the West, where, in fact, no sort but Wilson has received much favor for some years from any but a few amateurs. The footstalks of the Lady Finger are tall and strong, so that its fruit is well up out of dirt.

FIG. 101.—*Triomphe de Gand.*

FRENCH'S SEEDLING is another good sort, ripening early, and of good size, quality, and color, and quite productive, but too soft for a market berry.

Golden Seeded, with us, has not given a yield of value sufficient to induce us to continue growing it. The fruit, however, is extremely good.

Colonel Ellsworth is another which we have no further desire to cultivate—to which we will add Progress and Chillian.

Hovey continues with us, under good treatment, one of our best but not most prolific berries. When we say best, we

Fig. 102.—*Ladies' Finger.*

would not intend to say that it is of the finest quality, but the berries are so large, fair, even, bright, and handsome that we can not do without it.

Hooker is high flavored and delicious, but the plant with us is so poor a grower, that we only keep a little bed of it, just to see and taste it.

Longworth's Prolific is a variety we have often said, and now write, that should

have received the Cincinnati prize instead of McAvoy's Superior, for the vine is hardy, healthy, a self-impregnator, and productive of a handsome, large, light crimson fruit of a sprightly character, that is fine for the table, and especially valuable over all others for canning.

IDA.—Among the new varieties, none present to us better promise than this one. It is pistillate in flower, but planted adjacent, as our bed was this year, to Downer's Prolific, it set every fruit perfect in form. Its footstalks were strong, holding the fruit well up from the earth, while the fruit is large, slightly conical, bright scarlet, and quite above medium quality. The

FIG. 103.—*Ida.*

plants are very hardy, and strong growers, leaf sharply serrated, and altogether one of so much promise that we shall test it pretty freely another season.

BROOKLYN SCARLET we have not succeeded as favorably in fruiting as we could have wished, out of compliment to its originator, and without saying more, will try it another season.

NEW JERSEY SCARLET is with us a strong grower, but as we have it, a strictly pistillate plant. The fruit corresponds with descriptions made, and we have no reason to think it has been overpraised.

RUSSELL'S PROLIFIC is really a fine berry. It is a little too soft for market, but is of a rich, good color, good form and size, and quite productive.

AGRICULTURIST has, with us, not proved a very strong grower, but in some light sandy soil we have seen it growing, it has shown very handsome and large fruit, besides being quite productive. Altogether it is probably an acquisition to the collection of strawberries. The fruit is large, not at all regular in form, with a long neck,

FIG. 104.—*Downer's Prolific.*

of light reddish crimson, not quite as firm as is desirable for a popular market berry, in which, by-the-by, *Hovey* surpasses any other sort.

GREEN PROLIFIC.—This, as with the last named, was originated by Mr. Seth Boyden, of Newark, N. J., and in many if not most places where tested, has proved one of the desirable late maturing sorts. It is a strong, vigorous growing plant, pistillated, really

requiring an associate for complete fertilization, but then very productive, of large, even, and regular size, and formed fruit of good color, that, where the market is near, will prove a profitable sort to grow.

Wilson's Albany needs no remark—all know it, and now from Maine to Louisiana, nearly all who grow for market plant and grow it, and that, too, profitably.

Downer's Prolific.—With this variety we will close our notes on varieties for this season, although many more than here named have been under our care and observation. Comparatively little known, the Downer is nevertheless a variety of very considerable value, in its hardiness of vine, great productiveness, almost if not quite equaling the Wilson, and its maturing its fruit very early, among the very earliest, and continuing it until the last. Too soft for market, where transportation by cars is necessary, and if picked before fully ripe a little acid, yet in the garden of the amateur, where it can fully ripen, there is hardly any one early sort its superior, all things considered.

PROPAGATION OF PLANTS BY CUTTINGS OF THE GREEN WOOD.

BY ANDREW S. FULLER.

When propagating from the young growing wood or succulent stems of herbaceous plants, it should be borne in mind that we are operating with an active vegetation instead of one that is dormant.

In the cuttings made from ripe wood there is a supply of organized material from which roots are produced; but in those made from young growing wood, this is only in a state of transmutation, and the object is to accelerate this change, if possible.

To accomplish this, it is generally necessary to surround the cutting with a warm, moist, and somewhat confined atmosphere,

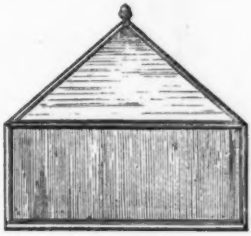

Fig. 105.

so that the exhalation, which is very rapid in an open situation, can be controlled. For if the quantity of moisture given off by the leaves is greater than that absorbed, then they will surely droop, and an artificial application of water to revive them will often hasten their destruction.

Fig. 106.

Various are the devices employed by propagators to produce that peculiar state of the atmosphere most suitable to the growth of different kinds of plants. Glass is the principal material used in erecting propagating-houses, because it is the most durable, and through it the plants receive light, which is indispensable to growth, while at the same time heat and moisture are under control of the operator.

While the professional gardener depends mainly upon the propagating-house to multiply those plants requiring artificial heat, the amateur produces the same results, although not so extensively, nor with so

great a variety of plants, with the aid of the common hot-bed, or with the hand-glass, fig. 105, or bell-glass, fig. 106.

Many kinds of plants can be readily

Fig. 107.

propagated from green cuttings planted in the open ground, if covered with a common hand or bell glass. The soil in which the cuttings are planted should be composed in great part of pure sand, with very little vegetable matter, so that it shall not become sodden or heavy though watered ever so frequently. Some kinds of plants will grow readily from the green cuttings planted in pure sand and water, or in the latter without the addition of any earthy matter. The common oleander, grape, etc., are well-known examples that produce roots quite readily under these conditions, although no very extended growth can take place without the addition of mineral substances. Although water is one of the best materials known in which to strike cuttings, still the great difficulty is in transferring them from it to the soil without checking the growth. In a confined atmosphere it can be done quite readily, but in an open one it is a very uncertain operation.

In preparing green wood cuttings, a large portion of the leaves should be allowed to remain, for the purpose of assisting in the preparation of the material required to produce roots.

In selecting the cuttings, it is generally best to slip them off close to the more mature wood, leaving the hip or ring of half ripened wood attached to its base; for as we stated in the chapter on "Ripe Wood Cuttings" there is always a concentration of buds at this point, and more available organized matter at this place than elsewhere. A few of the lower leaves may then be removed, as shown in fig. 107.

This slipping off the young shoot is not always practicable, because some plants produce few or no lateral branches; in such cases the terminal shoots are usually selected, although with many kinds the entire stems may be divided into sections leaving only two buds upon each, one being placed below the surface and the other above.

No general rule can be given as to the exact time for separating the cuttings from the parent plant; with some it is better to

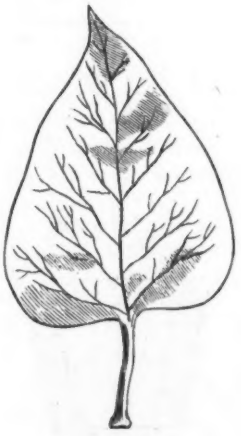

Fig. 108.

take them off while the wood is very young, even when it first starts, while with others the wood should be almost

nature. In some of the succulent plants, like the cactuses, stapelias, and others of similar structure, they are benefited by being dried somewhat before planting.

Fig. 109.

All the variations in structure, form of growth, the great difference in tenacity of life in plants, show us that practical experience is required to produce the best results, even by those who may have carefully studied all the theories ever advanced upon the subject.

Cuttings of the rose, currant, willow, and hundreds of other species of plants, grow readily with very ordinary care, either from the green or ripe wood, while the hickories, oaks, and many others are among the most difficult to propagate in this manner; the cause may or may not be known.

CUTTINGS OF THE LEAVES.

Cuttings of the leaves are seldom used in propagating hardy plants. They are

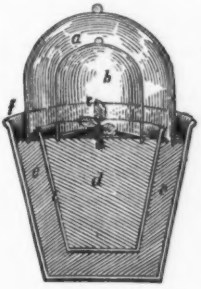

Fig. 110.

sometimes employed merely for the purpose of showing what may be done, although there are usually other methods which are attended with less trouble and are far more certain. When it is desirable to propagate from cuttings of the leaves of woody plants, they are usually taken off entire, with the petiole or leaf-stalk attached, as shown in fig. 108; the petiole in this case representing the stem of a cutting of green wood.

The leaf shown in fig. 108 is that of the common lilac. If carefully separated from the branch, when fully expanded, but not mature, and placed under proper conditions, roots will be emitted from the lower

Fig. 111.

end of the petiole; afterward a bud will be produced near the junction, showing conclusively that buds, or the power of producing them in woody plants, do not belong exclusively to the stems, branches, or roots, as some vegetable physiologists assert, but that even the leaves are capable of becoming individual plants. The rose has often been propagated from its leaves; in fig. 109 is shown a rooted leaf with the small bud at the base of petiole as it appears when first starting to form a new stem. The usual method employed in making experiments with such delicate subjects is to use two bell-glasses, placing one over the other, as shown in fig. 110, the

leaf cutting being planted in pure sand in the center of the pot. Also two pots are sometimes used, as shown; *d*, the center one, being filled with pure sand, and the space between the two, *e*, filled with moss or tan; *f*. the outside pot; *a*, the large bell-glass; *b*, the smaller one; *c*, the leaf cutting.

As I have previously stated, propagating woody plants in this manner is of no practical use, but it merely shows us that it can be done; besides, it furnishes positive proof that many theories heretofore advanced in regard to the origin of buds and structure of leaves are wholly untenable. In propagating succulent plants, many of which have no true leaves, the stems answering the place of both, we are obliged to use the leaves or stems, whichever we may choose to call them; but there are other plants, like the gloxinias, begonias, portulaccas, lilies, some of the ferns, in fact, a host of exotic plants, as well as a number of indigenous ones, of which it is often quite convenient to use the leaves for the purpose of propagation. With what are usually called herbaceous plants, that can readily be propagated in this manner, it is not necessary to plant the leaf entire, but it may be divided into a number of cuttings, and each will produce one or more plants. Fig. 111 shows a section of a begonia leaf with roots and the new plant as they are first formed.

With these leaf cuttings a warm humid atmosphere is very essential as well as with green wood cuttings and leaves of woody plants. Various materials are sometimes used in which to grow the green as well as ripe wood cuttings—sand, clay, peat, pulverized brick, moss, tan-bark, spent hops, etc., etc., each of which have had their advocates and day of popularity; yet the most skillful propagators of plants at the present time depend mainly upon sand, for in addition to its porous nature, which admits of such perfect drainage, it contains less noxious materials which often combine with the juices of the plants when exposed, and thereby cause their destruction. The amount of plant food required by cuttings while producing roots is so exceedingly small, that the air and water which surround them will generally furnish a full supply.

NEW SEEDLING TREE PEONIAS.

Among all of our showy early blooming hardy shrubs, perhaps none are more to be prized than Tree Peonias. The price of them, as compared with other shrubs, has undoubtedly prevented many a person from buying as buyers often do, on the representation of their beauty by the dealer; but the want of colors and distinctiveness has also been an objection and drawback to their more general introduction to the grounds of amateurs and others who desire the most of beauty with hardihood. To remedy this, Professor J. P. Kirtland, of Cleveland, well known as a zealous horticulturist and the originator of many rare fruits, cherries, pears, etc., at the suggestion and indication of Hon. Marshall P. Wilder, some fifteen or sixteen years since set about a course of practice by hybridizing and raising seedlings in order to test what advance and improvement could be made. Mr. Wilder forwarded the Professor a plant of the peonia with single flowers, the petals of which were a dark rosy purple, deepest in color at the base, and from this, but how, hybridized or otherwise improved in the seed, our friend who gives us these items does not write, some thousand or more seedlings have been grown, and this season a few of them have shown flowers of so much beauty and distinctiveness in color that the Professor has decided to name two of them.

The first named he calls after Hon. Mar-

shall P. Wilder, as the instigator toward the production and as a due tribute to the man; while to every hearer of the name the association with all that is beautiful and good in horticulture or floriculture will ever be identified. This plant has a strong and vigorous habit, its blooms being of the largest size, from eight to ten inches in diameter, petals revolute, irregular, deep scarlet at base shading out to a clear light peach pink on edge, altogether one of the most strikingly attractive of the whole collection, and entirely distinct in its shade from any other.

The other one to which the Professor chooses at this time to attach a name is also large in size of flower, and a vigorous grower and free bloomer, its blooms being a dark rich carmine at base of petals shading out to a peach-blow pink, not white, as is the case with the *Papaverácea;* but standing within ten feet of a *Papaverácea*, its character and distinctness are so plain as to at once attract the eye. This variety is named after Edward S. Rand, Jr., of Boston.

But the Professor has others yet unnamed, and our friend, who writes us a glowing account of their unprecedented beauty and variety, goes on to describe some as follows:

"One, an immense flower, seven inches deep and about eight inches across, broad revolute petals of a delicate, rich, deep rosy pink shading, and lined out to the edge into a peach-blow white, and full clear to the center. This, to my taste (writes our friend), is the gem of the collection, but it would not please the hundreds as well as Colonel Wilder. Another seedling, with large and full flowers, has the colors of Empress Eugenie (?) but the petals are more regular, round, and broadly flat like a rose, yet the margins are deeply serrated. Another has broad revolute petals, somewhat crimped on edge, of a pure white, shading into the base with shades of peach-blow violet. Another is with petals of a dark rosy purple, deepest at base, like the original single plant from which seed was obtained; but it is, if anything, a larger and more perfect-formed flower than the old *Papaverácea.* Another has flowers of the very largest size, some of them measuring nine by ten inches in diameter, with very large, broad, revolute petals of a rich, rosy, violet pink, deepening into carmine at base, and without a show of stamens, etc., in the center."

When we consider how perfectly hardy are the Tree Peonias, enduring all our temperatures as well as the oak tree, and the fact that a well-grown plant will give from sixty to one hundred and fifty blooms of most gorgeous flowers in a season, we can well appreciate the great item of floricultural beauty Professor Kirtland has now inaugurated, and which will doubtless soon become disseminated.

STRAWBERRY BEDS, as soon as they have done fruiting, should be dug over deeply between the rows, in order to have new plants from the runners take freely. It is well, as soon as the ground is dug, to go over and train out the runners from the main or old plants just to the point wanted, and sprinkle a little earth over each starting bud. Repeat this from time to time, and early in fall you can dig under the old vines, and thus help to increase the vigor of the young or new rows. Plants in hills should also be dug deeply around, because they now send out new roots and make new plants, as it were, from all around the mother or parent plant. Later in the season it may be well to cut out the old plant, thus leaving the hill a circle of plants rather than a mass. Plants in hills must have all runners taken off, and so also should those to be grown in rows have the runners destroyed just as soon as plants sufficient to reset the rows have formed.

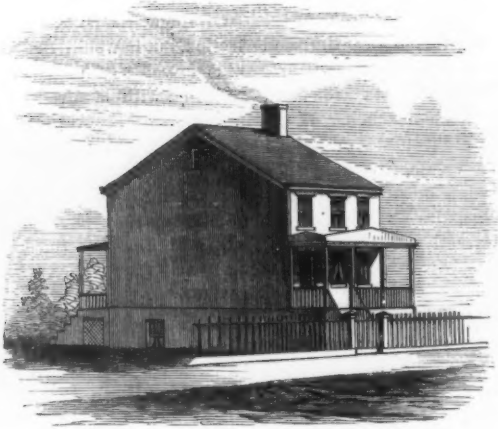

FIG. 112.—*The Old House.*

FIG. 113.—*The same Remodelled.*

DESIGNS IN RURAL ARCHITECTURE—No. 22.

BY GEORGE E. HARNEY, ARCHITECT, COLD SPRING, N. Y.

THE accompanying sketches will convey a good idea of some alterations and additions made to an old house in this neighborhood, under our direction, during the past winter.

Though it is always an exceedingly interesting task, it is not always a very easy one, to make a new and comely house out of an old and ugly one; there are so many stubborn points to contend with—so much has to be undone before anything satisfactory can be done, and this was no exception to the rule. The house was very small, very ugly, and situated very close to the side-walk; but the walls were in good condition, the foundations were solid, the partitions were right, and, for other good reasons, it was not deemed desirable to destroy it. Accordingly the work of remodeling was undertaken.

The results, which we here give, we have reason to believe to be quite satisfactory, and we place them before the reader as an answer to a number of inquiries which have lately been made of us on this subject.

The house, at the time of its purchase by the present proprietor, was a plain, two-story brick building, measuring twenty-two feet by twenty-four, with a narrow veranda extending along the front, and close to the side-walk, as represented in fig. 112.

It had a hall five and a half feet wide, extending through from front to rear, with a door at each end, and in this hall was the staircase, which occupied so much space that there was barely room to pass around it. On the right was a room about fifteen feet square, and directly back of that were two other rooms, formerly used, we presume, as bedrooms, each about seven feet square. The kitchen was in the basement, and there were three chambers on the second floor. (The original plan is shown by the darker lines in the engraving.)

The alterations were somewhat as follows: In order to throw the front as far away from the street as possible, the veranda was taken entirely away and its place supplied by a narrow balcony, opening from the rooms by French windows.

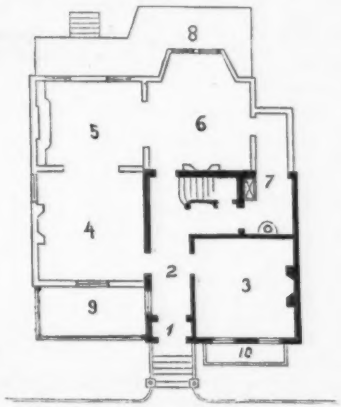

FIG. 114.—*Ground Plan.*

To carry out this idea still further, the entrance was recessed about three feet, so that the front doors were about thirteen feet from the fence.

The staircases were taken away and new ones put up, farther back, taking up the space before occupied by one of the little bedrooms, so that the hall was left free and clear of obstructions. These stairways were made winding, and the hall, extending through both the principal stories and the attic, was surmounted by a large skylight and ventilator, the whole height being about twenty-six feet.

The old roof was taken off and the walls

carried up about three feet higher, in order to get a large servants' room in the old part; and as the rooms of the old part were lower than was desirable in the new, the three tiers of rooms there made up a height equal to the two stories of the addition. A hipped roof, with a bracketed cornice, then covered the whole building.

Six rooms were added, three on each floor (see the lighter portions of the plan), and the whole accommodation of the house as it now stands is as follows:

1. The front door recess, opening into No. 2, the hall, which, with No. 3, the sitting-room, and a portion of the pantry, No. 7, make up the whole of the original house.

No. 4. Parlor, sixteen feet by twenty, connected by folding doors with the library, No. 5, ten feet by sixteen, which, in its turn, opens, by folding doors, into No. 6, the dining room, a pleasant apartment, sixteen feet by twenty. This dining-room also opens directly into the main hall, at the foot of the staircase. The parlor has a large French window in the front, opening directly out upon the veranda, No. 9, seen also in the engraving, fig. 113, and both library and dining-room open out upon a gallery, No. 8, which extends along the rear of the house.

The library is fitted up with stationary low bookcases, and the rooms have all open fire-places.

The pantry, No. 7, is seven feet wide by about fifteen feet long, and has shelves and cupboards for china, etc., a large dumb-waiter from the kitchen, and a wash bowl with hot and cold water fixtures. The stairs to the kitchen are under the main flight, and are shut off from the principal hall. The kitchen occupies all of the basement of the old house except that portion taken up by the staircase, and is unusually large and complete in its arrangements for a house of this extent. It is about twenty feet wide and twenty-two feet long; it has one of Quimby's large ranges, with all the fixtures complete, including a sixty-gallon copper boiler and plumbing arrangements; a cast-iron sink, with slab and dripping boards; a dresser occupying the whole of one side; and, in a closet, a dumb-waiter rising to the pantry above.

Under the dining-room is a laundry, fitted up with three stationary wash trays, and a cast-iron wash sink; and under the parlor and library is the open cellar, which has a cemented floor and a plastered ceiling; two coal-bins and a wine-closet are here provided. In the chamber story there are four chambers, three of which have large closets, and the fourth a dressing-room attached. There is a bath-room on this floor, directly over the pantry.

The attic provides servants' rooms and an open garret.

Gas and hot and cold water are provided throughout, and the house is very satisfactorily heated by a furnace. The finish is plain throughout, but the workmanship is of good quality; the walls are all finished rough, and are tinted in a variety of shades, suited to the different uses of the rooms.

Layering Roses.—Hybrid, perpetual, and other roses may be layered this month, or as soon as they have completed their first flowering. All works on roses or fruit trees give directions as to how the work should be done, and therefore we will not repeat. We will, however, say that earlier writers told us to make the cut on the under side—recent writers say cut on the upper side—while our experience has been to cut a sliver out entirely from the upper side, giving us success, and preventing any possibility of anything but new roots forming where the cut is made. Moss from the woods is the best material for mulching or covering the soil where the layer is made, but if that is not readily obtainable, fresh-mown grass is good.

FLAVOR OF PLANTS AS AFFECTED BY SOIL AND CULTURE.

One day, at table, I offered some radishes to a friend from the other side of the Atlantic, who refused them with the remark that he never ate radishes in this country. Now, my friend is a liberal man, although he is a Scotchman, and therefore I felt that it could not be altogether prejudice that influenced him, so the ready question rose to my lips—Why?

"Your summers are too hot and bright to grow good radishes," was his answer. "Fight against it as you may, your radishes will elaborate in too great abundance their peculiar flavoring matter, and instead of being mild and delicate, will become hot and high flavored. At least, after having been in your country for more than a dozen years, and having tasted the best samples to be found on the tables of your hotels and in many private families, such has been the conclusion at which I have arrived. You can not equal Scotch oats or radishes."

I suspect my Scotch friend is more than half right, and am inclined to believe we do not consider sufficiently the influence which climate and culture have upon the flavor and other qualities of our fruits and vegetables.

The vast differences produced by these agencies are well known to botanists. Thus the Turkey rhubarb when transplanted to England flourishes with a most luxuriant growth; but the peculiar constituent which confers its medicinal value upon rhubarb is not secreted in anything like the proportions in which it is produced in the East.

So, too, the plant which produces the famous hasheesh is believed by all botanists to be identical with our common hemp, and yet hasheesh is not produced in Europe. Even very narrow limits sometimes circumscribe a locality within which plants present marked differences from plants grown outside of these boundaries. Thus Dr. Christison tells us that the poisonous hemlock loses nearly all its virulence when grown in the neighborhood of Edinburgh.

With these special facts before us, and in view of others of a more general nature which are better known, it is impossible to doubt the wondrous influence of soil and climate upon the flavor and chemical constitution of vegetable productions.

How far can art modify and change these influences?

We know that pine-apples grown under the murky skies of England by the aid of glass and artificial heat have a flavor fully equal to that of the native productions of the tropics. The Catawba grapes grown under glass in New England successfully rival clusters from the vine-clad banks of the Ohio; and if the profit would counterbalance the cost, we doubt not but hasheesh could be grown in England.

The great agents which influence the production of flavor and of those organic compounds which confer upon plants their chemical and medicinal peculiarities are light, heat, and moisture.

The general influence of light upon plants is too well known to require elaborate discussion. We all know that it is the light falling upon the tender leaves, and aiding by its chemical powers the vital forces of the plant, that builds up every vegetable structure. The leaves of the forest flutter in the breeze and drink in from the air the material of their growth; but the sun is the true alchemist, working wonders more strange than those of Geber and all his tribe, and converting this crude material into heart of oak to battle with ocean storms, or into costly and odoriferous woods to adorn the habitation of man. And in few countries does this magician exert greater power than in our own. He descends into the ateliers of our photog-

raphers, and their productions eclipse those of the world beside; we leave our peach-trees exposed to all the vicissitudes of a severe climate, and yet he confers upon their fruit a flavor equal to the highly nurtured trees of less favored countries. And when in our ignorance we build long rows of vineries and green-houses, and expose the plants therein to his unobstructed rays, we learn that while in England all the sunlight that is obtainable is scarcely too much, in our country we must carefully guard against giving him full sway.

Now the tendency of light is to heighten the flavor of all fruit borne by the plant upon which it acts, and further to promote the secretion of any essential oil which gives flavor to the plant itself. Take, for example, the plant in which all this is most commonly illustrated—celery. The flavor of the etiolated portion of a well-blanched plant of celery is exceedingly delicate, but I am not aware that it is owing to the presence of any substance different from that which gives flavor to the ranker leaves. Indeed, it is well known to cooks, that for flavoring soups, the tops of celery are quite as good and far more efficient than the blanched stalks. So, too, when turnip bulbs in a growing state are exposed to the light, their surface becomes green and leaf-like, and in this condition it is well known by stock feeders that they are exceedingly irritant to the digestive organs of cattle, and have frequently produced serious difficulty. All this is no doubt familiar to our readers, and I have collected these things, not as examples of "things not generally known," but as mere illustrations tending to place the best methods of practice in a clear light.

The agency of heat is not so well understood as that of light. It is yet a question how far heat may be substituted for light in the production of flavor. The results occasionally obtained under glass would lead us to believe that well-regulated heat can often affect the results usually obtained by the action of light. Of course, in ordinary culture, heat and light are practically synonymous, as they are almost always coexistent; a hot summer is always a bright one.

Moisture, when accompanied with heat, always promotes a rapid development of cellular tissue. Now the rapid growth of cellular tissue does not necessarily imply a correspondingly rapid increase of the other constituents of the plant. Indeed, cellular tissue is often found to be largely developed under circumstances most unfavorable to general growth, as in the case of potatoes sprouting in a dark cellar. To enable a plant to make a healthy growth, light also is necessary.

Let us now consider what will be the effect of increasing or diminishing the action of any one of these agents.

We have seen that the great agents in the developement of cellular tissue, that is to say size, are heat and moisture. This is well understood by the Lancashire gooseberry-growers, who "suckle" their gooseberries to make them attain enormous size. The process of "suckling" consists in supporting a saucer under each berry, the saucer being so far filled with water that about one fourth of the berry is covered. At the same time very rich soil and abundance of liquid manure are used, and the plants are somewhat shaded from the light to prevent the tissues of the fruit from hardening, and consequently ceasing to grow. In this way berries weighing nearly two ounces avoirdupois have been obtained. But such fruit is almost destitute of flavor; and although large prizes have been awarded to such berries, they can only be regarded as monstrosities.

On the other hand, we find that the highest-flavored grapes in the world are grown on dry and rocky hillsides, where the soil is scant and the growth of the plant comparatively slow. In such cases the berries are small, but the proportion of flavoring matter to the other components of the fruit is large.

The presence of light and heat produce

high flavor; heat and moisture produce large size with deficient flavor.

In the light of these facts and laws it will not be difficult so to regulate our practice as to attain a measurable degree of success in modifying soil and climate and securing such flavor as we desire. Do we require high flavor and abundant sweetness in our fruits? We must see that our soil is thoroughly drained and rendered open and porous. We must eschew all rank manures, and we will prune judiciously, that is, neither to weaken on the one hand, nor to force into luxuriance on the other. Our fruit will not then be of the monstrous size we sometimes see at fruit shows, but it will more than make up in quality what it lacks in quantity. It is true that some will always be found to prefer the large fruit, and so we presume some will always be found who prefer a Concord grape to a Delaware, and a Bartlett pear to a Seckel. There are men who prefer pork and beans to canvas-back ducks.

But in some of the productions of the garden, flavor may be too high, or, rather, perhaps we should say, too strong. Ever since the day our Scotch friend refused our radishes, we have adopted what Downing has well called "that practice founded on principle which has been most beneficially introduced into our horticulture"—*mulching*. A couple of inches of clean mulch (such as straw or coarse hay) not only blanches the upper portion of the stem, but keeps the ground constantly moist, open, and porous. Moreover, the leaf-stems are etiolated, and the whole plant forced into delicate succulence.

The operation should be performed at the time the plants begin to swell. If performed earlier, they are apt to draw up and become spindling; if deferred too long, the required effect is not produced. Others, however, besides my Scotch friend, have objected to radishes as ordinarily grown. That close observer and skillful gardener, McMahon, in his "American Gardener's Calendar," directs us to be very careful about our radishes, and recommends very frequent waterings, lest the plants should "grow hot and sticky." Moreover, he tells us "a thin sprinkling of radish-seed may be sown among other general crops, which will grow freely, and being detached will form large, crisp roots." The "general crops" prevented the free access of light, and served the same purpose as our mulching.

Other applications of this principle will occur to the reader, and although he, no doubt, *knew* it all before, perhaps we have not lost our time if we have succeeded in causing him to think of it. VITICOLA.

NOTES ON THE MAY NUMBER.

POPULAR EVERGREEN TREES, *Continued.*—As I said in my notes of April, this is a timely article, and shows that the editors and publishers of the HORTICULTURIST intend and do keep up with the wants of the people and the labors of the season.

The Lawson Cypress is certainly one of our most beautiful evergreens of recent introduction, but I may be excused if I suggest to planters the policy of screening it from the south and west suns during winter, at least until the plants become well grown and established. While we concede to the Norway Spruce beauty and grandeur, let us, as you here hint, remember that however popular it may be, it nevertheless is not so well suited to small grounds as our American Spruces. I am glad to see you give due credit to our common but beautiful yet neglected Hemlock. Some call it a slow grower, but such assertions only show the caller one who knows nothing of its culture. Had we to seek trees of it from China or Japan, there is not an

evergreen in the whole collection that would be as much prized; but we shall learn after a time, in arboriculture, that the United States produces much of material unsurpassed if equaled by any other nation.

THE ARTIFICIAL FOUNTAIN.—The writer says, "How strong and ever present are the laws of association!" and thus prefers the bubbling brook which tinkles night and day to the ear, in preference to the sweeping expanse of lake or river, with its clouds of white sails or curling eddies of vapor as they show the position of vessels or steamers floating on in grandeur or in graceful beauty.

Fortunate indeed is he who can hear the bubbling stream of pure water in connection with the spread of waters and the passing life thereon; but if but one, give me the broad expanse into whose liquid element the sun nightly passes from view amid a gorgeous golden sheen of yellow gold and crimson. The dell and rivulet are all right in a midsummer day at noon, but the broad waters are a constant scene of beauty, grand in storm, soothing in midday, and hallowing at evening. But the writer and I will agree in the beauty and enjoyment obtainable from a fountain, and especially from a weeping or trickling one, rather than a bold jet, and more especially as applicable to conservatories. In the open grounds few places have space or extent sufficient to warrant the introduction of water, except as it may be to come through and over some little rock-work or group of wild plants, in an apparently neglected corner, not brought out prominently to the eye, and detracting rather than adding to the dignity or character of the grounds. Wall fountains, as the writer says, are admissible in close contiguity to buildings; but as he did not, I will, censure the basins of mason work, with a little half-inch jet in center, as utterly inadmissible, and making just what this writer censures, viz., the water a secondary effort to the masonry. Where the flow of water is from a griffin's head, a lion's mouth, etc., and the basin merely a receptacle for it, all right; but away with circular stone fountains and little jets so small that one has need of spectacles to see them!

PROPAGATION OF PLANTS.—Mr. Fuller is perfectly at home in this article, and what he writes may be counted on as the record of practice, and a safe guide for all who choose to follow.

DESIGN FOR DWELLING-HOUSE, ITALIAN STYLE.—I like this all through; there is a continuity and character in the design that is pleasing to the eye, depicting comfort and taste, with no straining or intermingling of orders. The only objection I should make were I building, would be that there is too little ground covered, an objection easily remedied, as the style will readily admit of more expanse. Of the many good designs published in the HORTICULTURIST, this certainly is one of the best.

THE ART OF INCREASING PLANTS BY CUTTINGS.—An extremely valuable article; but why did you not adopt the practice of one of your competitors by saying "*adapted*" from the *Floral World*, and thus try to make your readers imagine you knew more than the author whose actual words only were used?

DUCHESS OF OLDENBURGH APPLE.—I am glad to see Mr. Barry out so plainly in remarks on this and others of our apples, which, although of not the highest rank in quality as table fruits, nevertheless meet the wants of an immense territory and people who must and will have fruits, and who, if the best can not be grown, adapt themselves to their location and enjoy a Duchess of Oldenburgh, grown in their own grounds, just as much as Mr. Barry would an Early Joe or Garden Royal. It is singular that a recent work on Apples alone, should ignore the identity of Borovitsky and Duchess of Oldenburgh, but so it is.

A FEW OF THE MOST EFFECTIVE FLOWERING BEDDERS.—To those who were bedding out and sought new things as well as old, this must have been a valuable record,

and I only want to add, that when this reaches your readers there will yet be time for planting out of Geraniums, Lantanas, etc., to make gay the autumn. Where there is room, no plant gives more of show than the Lantana, and I plant freely of it in its different varieties.

ELMS AND MAPLES.—My good friend Hicks thinks English Elm not a true, but indefinite name, because some people in speaking of it mean the Cork-Bark. All are English Elms, and when speaking in general terms of them, the name I think is correct, as showing the distinction between them and our American Elm. They are all Elms—one species a native of Europe and one of America, and unless we particularize, the term is all right; but, again, the term English Elm will, I think, hold good over the country as conveying to the mind the variety (*Ulmus campestris*).

I must differ with friend Hicks in his values of comparisons of the Maple; and while I concede the Silver-Leaf Maple a more rapid grower than the Red-flowering, I can not allow that it is as perfect a tree, and I must claim that it is frequently liable to break away in its branches and thus spoil its symmetry; and again, my experience has not been favorable to the Norway Maple for dry soil.

GROUPING.—In advocating shelter by means of masses and belts of Evergreens, all will agree with the writer, that its benefits are as yet but little understood or appreciated by our fruit-growing people. We need shelter, especially to our small and high-flavored fruits, and so also to many varieties of pears and cherries; while whoever grows peaches knows full well the benefit of just a little protection from harsh, cold winds. In advising the Norway Spruce and Hemlock for main belts, doubtless the writer is correct, but among the smaller Evergreens for the protection of our strawberries, raspberries, etc., we have the Savin and many varieties of the Juniper, and last, not least, our hardy Kalmias and Rhododendrons, which are just as easily grown as any other class of shrubs. I saw, a few days since, a little piece of hedge made with Irish Juniper, that for neatness and effect can not be surpassed.

REUBEN.

HAVE WE ANY BOTANISTS AMONG US?

IN looking over the last Report of the Department of Agriculture, nothing was so encouraging as the progress in scientific *phraseology* visible over the entire volume. Whether the information itself is reliable, it is not now my purpose to inquire. On the regular staff of the department there is a chemist and entomologist, but we see no record of a botanist. Is botanical science, then, of third-rate importance toward the development of the agricultural resources of this wide continent?

The chemist, however, does up the botanical matter in addition to his chemical labors, for we have a chapter on the "Grape Disease in Europe." He states that the literature of the grape disease is meager, and enumerates several sources from which he has collected material, but we fear he has not been very assiduous in his search; we could point him to many much more prolific sources of information.

The deductions respecting the probable identity of several distinct forms of parasitic fungi may do very well coming from an amateur in botany, but they will appear absurd to those who give some attention to the study of cryptogamic plants. In three separate parts of the Report the subject of fungi is treated with the same absence of scientific knowledge. Can no botanist be found to contribute to the Report?

R. R. S

EDITOR'S TABLE.

To Contributors and Others.—Address all Communications, for the Editorial and Publishing Departments, to Geo. E. & F. W. Woodward, 37 Park Row, New York.

Chestertown, Kent Co., Md., *June* 11, 1867.

Messrs. Editors: We have been having a very cold, backward spring, and everything in the garden is behind its season. Speak a good word for McLean's Little Gem Pea; we have been eating it now several days, and I find it the most delicious pea I ever tasted. The vines are about fourteen inches high, and are a complete mass of peas, which in flavor are fully equal to the Champion of England, and without the tough skin of that variety. Keyes' Early Prolific Tomato, from seed received from Hovey & Co., promises well. The vines are remarkably stocky and vigorous, and seem to form a stout, low bush rather than vine; leaves as broad as one's hand; no fruit ripe yet, but well set with large clusters. The Dwarf Erfurt Cauliflower promises exceedingly well. Strawberries nearly done; Agriculturist and Russell's Prolific ahead of anything tried.

The peach crop is the staple in this section, and the prospect is good for a fair, though not large crop. One gentleman in this county sold last year over $30,000 worth of peaches from six thousand trees, at a profit of $27,000. Many persons have orchards of from ten to twenty thousand trees, and several of thirty thousand; also one or two eighty thousand. More peach trees have been planted this spring than for some years. One nursery agent informs me that he sold $11,000 worth of peach-trees alone in this county, and he is but one of many. Grapes and pears are being largely planted.

We have a fine soil and good climate, and ought to be able to compete with any section. Some time, when business presses less, I may write you more from this section, as the Eastern Shore of Maryland seems to be almost a *terra incognita* at the North. Yours, etc., W. F. Massey.

Alvord's Hybrid Melon.—We are indebted to Mr. D. W. Alvord, Greenfield, Mass., for seeds of his new Hybrid Melon, a cross, as he writes, of the White Japan and Long Persian, made in 1863. The seeds were handed our amateur friend, who, in acknowledging their receipt, says, "The season has been so wet and cold, that up to this time, June 4th, I have been unable to plant successfully any melons, etc. Some seeds of well-known old sorts that I did plant have rotted, and I am glad I kept back my choice kinds for experiment, or trial, rather."

The ad-interim Committee of the Illinois State Horticultural Society will hold a meeting at the house of W. C. Flagg, Esq., Alton, Ill., August 1, for the purpose of examining peaches. We shall feel obliged for notes of the observations then and there made, and hope some of our friends will remember us.

The Green and Black Aphis, often abundant on the end of young shoots, may be easily destroyed by dipping them in a strong solution of tobacco and water.

Perpetual Roses should be mulched during the midsummer months if possible. New-mown grass is one of the best materials we have ever used. In September remove it, and stir well the soil.

TRIMMING HEDGES.—Early in this month it is desirable to cut in, a second time, hedges formed of Osage Orange or other deciduous plants. The cutting or shortening of the shoots serves to cause the remaining buds to break again and throw out side shoots, thickening up the hedge more than if left until next spring, when the cutting would only be a stimulus to the last or leading bud left.

SUMMER ROOT PRUNING.—A correspondent says "he has a large pear tree on pear roots standing in deep, loamy clay soil, and that while it grows freely, it does not set any fruit," and "asks about root pruning it, how and when."

With Mr. Rivers, whose valuable little work on pears should be in every one's possession, we think there is very much yet to be known about root pruning, and perhaps the advice we now give would not be sustained were we to see the tree. But as it is, we shall recommend that as soon as the terminal buds of this season's growth have formed or are forming, a trench be dug around the tree, two thirds in circumference the diameter of the branches. Dig down deep, so deep that you can, by opening a trench toward the body of the tree, get in a position to cut the tap root off about eighteen inches under ground, then with a sharp knife trim each end of the roots around the inner side of the trench, and again fill in the soil. Make sure that no strong lateral roots or duplicate tap roots are left uncut.

BROCCOLI and cauliflower can be grown almost as easily as cabbage. Dig the ground deep and supply it freely with well-rotted manure, and keep setting out young plants all along until early in August. The heads will come in freely and to your taste for the table, same as peas, along in order.

FOLIAGE IN TREES or plants bearing fruit we believe to be quite as great an item in detecting and deciding varieties as any item connected with the science of pomology. Looking over our currants a few

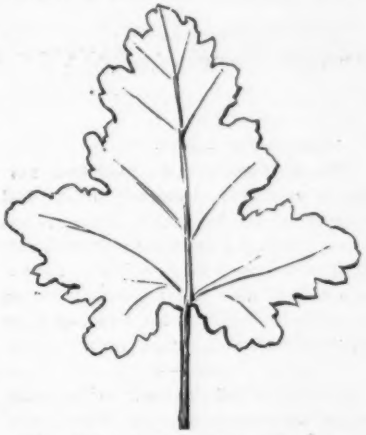

FIG. 115.—*Leaf of Cherry Currant.*

days since when pointing this item out to one of our young friends in horticultural studies, he at once drew our notice to the peculiar shades of color in the foliage as

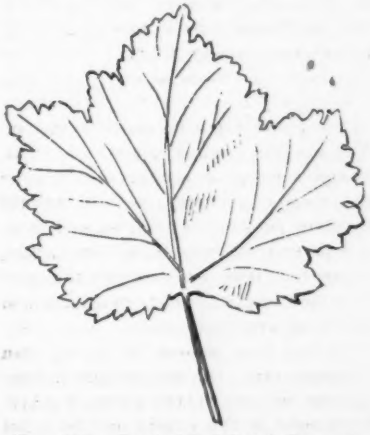

FIG. 116.—*Leaf of Red Dutch Currant.*

well as the form of leaf of the currants, and at his request we have roughly drawn out these two, Cherry and Red Dutch.

EARLY PEAS.—Last year our experience with early peas was given in favor of Carter's First Crop. This year again we planted Carter's First Crop, McLean's Advancer, and Tom Thumb, all the same day, and covered them all the same depth. As we write, Carter has bloomed and is setting its pods, while the other two are just commencing to bloom.

THE SLUG on cherry and pear trees may be easily destroyed by simply dusting over with fine slaked lime or dry dust. Where cultivation is pursued and the ground kept light and loose, a tin cup tied to the end of a stick, by which the dust can be scooped up and scattered over the tree, is a rapid and easy way of doing the work.

SUCKERS around the crowns of apple and other fruit trees can now be removed, with little prospect of their ever again sprouting. If removed in early spring, the buds remaining start and grow again, rather increasing than lessening the difficulty; but at this time, just as the lengthening growth is closed, nearly all the vitality is laid up in the leaves and stem, and if removed now, no further trouble will be likely to occur from their sprouting.

PAXTON'S STRAWBERRY CRINOLINE made of wire, in circular form, and supported by bending three ends of the wire down as legs or standards of support, and leaving the center open for the plant to exhibit itself, we have seen used in one or two instances, and with success, but for any but amateur gardeners or those preparing new sorts for exhibition, we do not think it will ever come into use.

PELARGONIUMS should be struck from cuttings this month, to produce the best blooming plant for next spring. Old plants should be headed in, but be careful not to cut too close, as often plants are thus destroyed. Keep the old plants rather dry for two or three weeks after heading in. The cuttings, if planted in a half-spent hot-bed, will root readily and freely; and if each cutting is inserted in a very small pot, and the whole of it plunged, giving to the pot good free drainage, it will afterward be little work to re-pot. As the plants grow, they should be occasionally stopped in, to make them form bushes rather than single stems.

SWEEDISH and other upright junipers that occasionally become too open, may be induced to grow more compact by winding them up with a fine wire at this season of the year, so that as the branches and stems harden and mature, they will more readily retain the upright habit.

VERBENAS to cause continuous flowering should never be permitted to seed. As soon as a bloom begins to fade, pick it off, pinching the shoot back two buds from the flower.

KNOWLEDGE in fruit culture, as in other matters, we do not think is all in the Old Country; and although we frequently make quotations from works there published, occasionally we come across a writer admitted into their journals without comments, whose teachings belie the practice of older men so much that we wonder at its admission. However, it is done perhaps as a Western writer once told us he wrote, viz., for the purpose of drawing others out. In a recent number of the *Cottage Gardener*, a writer asserts, that to get pears early, they must be grown on quince stock, ignoring the root pruning which may be practiced on pear stocks, as well as the fact of some varieties fruiting early, no matter on what stock they are grown.

EAST BETHLEHEM, PENN., *June* 10, 1867.

MESSRS. WOODWARD: In response to your request for notes on the ripening of strawberries, I cheerfully give a few for this section. The season being backward, the fruit is ripening a week later ther

usual; yet it has been peculiarly favorable for the production of this delicious fruit almost to perfection Copious showers of rain every few days have caused the fruit, generally, to grow to an enormous size. The yield will be large, the flowers of most varieties having miraculously escaped the effects of severe frosts.

The following account of ripening, etc., I give only for this section: The first to ripen was a variety I received under the name of "Philadelphia Scarlet;" ripened June 6th, bears well, but is purely pistillate, and on that account is not worth cultivating. Next to this, and three days later, came "Wilson's Albany" and "Knox's 700;" of the merits of the former I need not speak—they are all well known. I will only say that it is a wonderful bearer of beautiful berrries with entirely too much acidity. "Knox's 700;" ah! here is the prince among strawberries. If it succeeds with you and elsewhere as it does here, then I may safely say *perfection* is reached. Such berries it were a pleasure to look upon—much greater to feast upon. If I could have but one variety for market or for family use, "700" would stand far, *far* in advance of all others within my knowledge for these purposes. The fruit

Fig. 117.

is enormously large, and the plant wonderfully productive. Fruit is very solid, and is the richest and most highly flavored of any strawberry I ever tasted. The large number of monster berries to the plant appears to be one of the most prominent features of the variety. Advise every friend and reader of

Fig. 118.

the Horticulturist to plant a few. If they succeed, they will soon neglect or discard all others. That Jucunda is not 700, and 700 not Jucunda, is a settled fact here.

Triomphe de Gand is now ripening its second crop of flowers. It blooms too early for us. Frost always takes the first crop. The fruit is very fine.

Agriculturist will be ripe in one or two days. From present appearances this variety is going to give a good account of itself. Plant not very vigorous; fruit stalk very short; a good bearer of very large, handsome, and uniform berries.

Russell will not rank high here. Is purely a pistillate variety, but easily fruited. Not not more than half as prolific as Wilson's Albany, and at least eight days later.

I have seen and tasted the fruit of many other varieties, but for good points in every respect give me "Knox's 700." I can not commend it too highly.

I have sketched one of "Knox's 700" berries (fig. 117), about the average size, and I assure you it is correct. They are generally wedge-shaped or conical, never round. Fig. 118 is the shape of many of the conical ones.

Very truly yours,

John H. Jenkins.

THE SQUASH BUG.—We wish to remind our friends who are growing squashes, and are troubled with the bug destroying the vines, that we have been for two years successful in keeping their injury within decent bounds by simply covering the vines with earth up to near the first flowers.

NURSERY TREES, with the buds of last year's setting now grown one or more feet, should have the old wood above the junction cut of the bed cleanly away, in order to have it heal over with new bark by the close of the season.

RIPE PEACHES.—A correspondent writes us from Cleveland, O., giving an account of the ripening of peaches on the 23d May, in the fruit-house of W. J. Gordon, Esq. Mr. Gordon is, and has been, absent traveling in Europe the last year, but his gardener, Mr. Harding, is perhaps one of the most skillful and experienced in the United States, and it is to his knowledge that, so far as we know, the first crop of orchard-house peaches ripe in May, have been grown in any of our Western cities.

GRAPEVINES which have been permitted to set all their fruit freely and to grow without care, may be now gone over, and the error of neglect in a measure remedied. If three bunches have got on a cane, pinch that cane back to three or four leaves from the last bunch; then act your good common-sense judgment as to which of the three bunches promises the least results, and with your vine scissors cut it away. Stop the laterals now, except upon the canes you design for next year's fruiting, by pinching them off as far back as can be done by the nails of your thumb and finger meeting; don't break and tear them away, or use a knife, but the tender, immature wood which your thumb and finger will remove by pinching will prove a benefit to the vine, while cutting and slashing will create injury. If you want really nice bunches, and even, well-matured fruit for your own table or market, we believe you will gain even on a large scale by now thinning out the small and surplus berries on each bunch by means of vine scissors. In small grounds there is no doubt of the value of this practice for the table, and we incline to a belief that the same practice will pay in market by the extra price obtained for the grapes.

GLASS tinted green, for hot or green houses in summer, we should like to hear if it has ever been used in this country, and what were the results. We have so many rainy days, so many days of cold, raw winds, that we favor of more in-door gardening, summer and winter, than has heretofore been practiced, and incline to the belief that an extra sash tinted green will supply a better shade, and yet give sufficient light, than the usual course of awnings.

GREEN TURF FOR CAMELLIAS.—In the *Cottage Gardener* additional testimony is given in favor of fresh turf for camellias. The writer says he places it on the flue and dries it just sufficiently to kill insects, but not to dry or char the soil.

SALSIFY, OR OYSTER PLANT.—Among vegetables of the kitchen garden, few know the value of the Salsify, or Oyster Plant. It is too late to sow it now; but those who have beds of it should remember that if the plants stand too thickly, they will be small, and only fit to pull the tops from next spring as early greens; but if well thinned out, and the ground kept loose, the roots furnish a dish for the table in late winter that is unequaled by any root crop.

LILIUM HEMATOCHROUM (*Hybridum*) is described "as a remarkable hybrid from Japan, of a stately habit, and with immense flowers of a somber chocolate color, deepening occasionally to black, or brightening to blood red."

COLEUS GIBSONII was sent home by Mr. John G. Veitch from New Caledonia, where it was discovered growing in vast quantities, its highly colored foliage forming a most striking feature. It is one of the results of the tour made by him in the South Pacific, which we have only to regret, in the cause of science and floriculture, was not more prolonged, and for various causes could not be as effective as he had himself wished or hoped it would be. Sufficient, however, has been done to entitle him to the gratitude of all lovers of plants, and perhaps to encourage some one to ransack those islands for their treasures.

In habit, *C. Gibsonii* is quite equal to *C. Verschaffeltii*, being dwarf and very bushy; the leaves are large, often exceeding five inches in length, and are of a light green color, distinctly veined and blotched with dark crimson purple. Mr. Veitch says of it, "that it is a most ornamental plant for pot culture, and can be recommended as an excellent companion to the other varieties for summer flower garden decoration, where, from its novel and distinct coloring, it can not fail to prove an acquisition.

If persons expect from it so brilliant an effect as from *C. Verschaffeltii*, of course they must needs be disappointed; but if they are contented that it shall occupy a place of interest in the many-colored parterre, they will find it suitable, and we think, moreover, that it will form an excellent plant for table decoration.—*Floral Magazine.*

ALTON (ILL.) HORTICULTURAL SOCIETY.—This Society embraces some of the most intelligent fruit and plant growers of the Western States, whose observation extends over a country rich in fruits of all kinds and soils of almost every description. We read their transactions with pleasure, and here and hereafter propose to extract more or less from them. In reporting on the hardihood of varieties of the peach to withstand frost without injury to the bud, the Large Early York was first, Oldmixon free next among the white-fleshed sorts, while of the yellow-fleshed varieties the old red-cheeked Melocoton and Smock were the winners.

In remarks on cultivation of orchards, Mr. W. C. Flagg said that a healthful growth was necessary to insure good fruit, but that no cultivation should be given after July, as late cultivation induced late growths and rendered the trees less hardy and capable of enduring the extreme changes of temperature in winter. He objected to planting potatoes in orchards, on account of the late stirring of the soil.

CINCINNATI HORTICULTURAL SOCIETY.—This old-established, and once, Western Society, we notice, continues to hold its regular weekly meetings. At the meeting May 18, Mr. Williams said he had destroyed numbers of curculio on the 4th instant.

Hooper's Seedling Strawberry was exhibited by Mr. Jackson, it being a variety imported from France last autumn—flowers pistillate, fruit large, good flavor.

EVERGREENS, that it is desired to keep down to a certain height or to make a close, symmetrical head, should be clipped as soon as they have made their terminal buds of this season, and before the wood is well ripened.

ARTIFICIAL GUANO.—Dr. Valentine, of Richmond, Va., gives the following receipt for making artificial guano: No. 1, dry peat,* 20 bushels; No. 2, wood ashes, 3 bushels; No. 3, fine bone dust, 3 bushels; No. 4, calcined plaster, 3 bushels; No. 5, nitrate of soda, 40 pounds; No. 6, sal. ammoniac, 22 pounds; No. 7, carb. ammonia, 11 pounds; No. 8, sulph. sodae, 20 pounds; No. 9, sulph. magnesia, 10 pounds; No. 10, common salt, 10 pounds.

* If peat can not be obtained, use garden mold or clean virgin soil instead.

Seeds of many of our hardy shrubs, if gathered as soon as ripened, and sown in light, sandy loam or leaf-mold, in a cold frame slightly protected by means of an old strip of cloth, can be grown into plants of from six to eighteen inches this season, and suitable for planting out in nursery-rows or hedges next spring.

Cattleyas.—Tropical plants, it is supposed, must have tropical heat to grow them finely, and hence many who have green, not hot, houses have avoided orchids and other tropical plants. A writer in the *Florist* says, that "the Cattleyas grow and thrive beautifully in cool houses," hence they can be readily grown in any ordinary green-house."

The Dodecatheon.—We must call the attention of our amateur florists to the Dodecatheon as one of the most beautiful flowering plants in the month of May with which we are acquainted. The leaves of the plant die away soon after flowering, when it may be removed and transplanted. A moist, cool, and light loamy soil suits it best; but if shaded during the heat of summer by foliage of other plants it may be grown in any good garden loam.

To Protect Young Trees against Mice.—A correspondent of the *Country Gentleman* says he protects young trees from mice in the following manner:

"Every farmer has plenty of old tins—such as boilers, tin pails, tin pans, etc., —which can be put to most excellent use. I take a large pair of shears and cut the old tin into strips in the shape of a parallelogram—the shorter side equal to the circumference of the young trees; the longer the other side is the better. I then bend the tin so cut around the young tree near the root, and my word for it, no mice will excoriate the trees so treated."

Sorghum Bagasse, as a mulch, says a correspondent of the *Country Gentleman*, induces a disease in the leaves like small blisters. He says his experience covers two years, and he thinks bagasse should be used with caution about pear-trees. We confess we can see no good reason for this, and can hardly believe the acid of a fruit fermentation or change of bagasse to vegetable loam can be the cause. We wish this experimenter had tried mulching with other materials at the same time, and given the comparative values and results; meantime we give this record, and shall be pleased to hear from any of our subscribers who have tried bagasse as a mulch.

Chrysanthemums should be, from time to time, looked over and topped in to make them form bushy, rather than tall straggling plants. There is no plant which will give as much satisfaction late in autumn or early winter as the Chrysanthemum, and we must remember that in September we are to pot off a number of them for our indoor enjoyment.

Pinching in of currant and gooseberry bushes is equally as applicable as to the pear or grape. In our June number we noticed the requisites, and although many trees may, ere this, meet the reader's eye, be passed the growth for the most successful operations, there are others that will yet need attention. At the same time, gooseberries and currants can now be stopped in profitably.

Transplanting Raspberries and Blackberries.—For the past two years we have annually planted out Raspberry and Blackberry plants in this month, July. We prepare our ground, and then go to the rows from which to remove the plants, having a tub or pail with a little muddy water in it, dig our plants, they being the half-grown ones of this year, pinch off the ends about two inches, set the roots into our pail of muddy water, and from that to their permanent position. We do not often lose a plant, and next season we get a fair crop of fruit.

DRAINING.—There is, undoubtedly, an advantage gained from perfect drainage in all soils, but those of a close, retentive character are the most benefited. Where the land is rolling, and surface-draining can be easily had, the necessity for under-draining is not so great as where the land lays nearly level. In our experience with trees, raspberries, etc, however, we have found surface-draining during winter and spring essential, even on the best of under-drained ground. This we do by plowing or earthing up ridges toward our trees and plants, and we do not plow them down again until near the month of June, or not until all prospect of heavy spring rains are over. Many persons desire to drain, but under the impression that tile is requisite; and as tile costs more than they feel able to expend, the work of improvement is postponed from year to year. For many years we have laid more or less yearly of drains, and have tried many materials, using tile, stones, both flat and round, brush, and bricks; and while all have worked well, we are strongly disposed to favor brush drains, and especially where the land is quite level or in any way of a mucky nature, or where quicksand is reached in the deepening of the ditch for the laying of material. We have found a deep drain, with brush laid in, always with the butts of the brush resting on the bottom, even if there is but a slight fall for the water to run off, to prove more satisfactory than one of tile. The flow of water over the whole surface of the ground, even though it rest there twenty-four hours in spring, we have found no injury, but rather a benefit. Grapes, strawberries, raspberries, etc., we have had flooded in open spells of weather in winter and again in early spring, and while some of our friends have regarded the plants as lost, we have lost none, but rather have gained in vigor of growth afterward. Our object in writing this is, that during this and the coming two months, time can almost always be found for putting in more or less of drains, and while many men may not have command of tile, nearly all can obtain brush from the forest for the hauling. Open ditches for taking the water from the under-drains are not as objectionable as some writers would have us believe. If they are made wide, say six or seven feet at top, and the sides sloped evenly, then sown with grass-seed so as to hold them firmly, they can easily be mown, and so kept clean and free; and if trees are planted along on the bank each side at appropriate distances, no ground need be lost. In making brush drains, trample the brush firm before filling on the soil, and at the outlets secure three or four feet with stones.

HIPPOPHAE RHAMNOIDES.—This shrub, common on the south shores of Lake Erie, is highly praised by a correspondent of the *Gardener's Chronicle*. He speaks of it as having, when in fruit, "spikes of berries six to nine inches in length, the berries of a primrose color underneath and rose color next the sun, oval in shape and about the size of holly berries." We have often advised our amateur friends to plant this shrub, because of the silvery character to the underside of the leaves, making it one of the most ornamental agents in forming a shrubbery. It is perfectly hardy, and easily transplanted.

WANTED—A HORTICULTURAL SOCIETY.—Under the above heading the June number of the *Agriculturist* makes some very just comments upon the fact of New York city, the great emporium to and from which nearly all items of progress flow, having no horticultural society or association of accredited repute over the country. While we write and issue our journal mainly for the country, and give record of societies in different sections, we confess we have often deeply regretted that New York had not a society where from time to time fruits and flowers could be shown and reported upon without any undue influence

except the actual merits of the plants or fruits. We also wish we had such an association where we could take our friends from East and West as they visit us, and by their comments learn many an item of horticultural knowledge. With the abundance of horticultural knowledge now acknowledged as in and around our city, there is no reason why we should not equal if not surpass every other society, and we are ready at any time to give our aid so far as possible toward the formation of an association.

Fruits for Market.—Around and in New York and Philadelphia, fruits for market are prepared, and put up neatly and in small packages; but one of our correspondents from the West writes us respecting the general practice there with dealers, which he denounces, and describes as destructive to the beauty and quality of the fruit. He says: "The retailers, as a rule, shovel the berries from one of their half-bushel draws, sometimes with a wooden spatula, and sometimes by dipping in the tin measure and scooping them up, mashing and bruising them out of all shape and comeliness." We can only utter our protest against such procedure, and advise all fruit men to make it a point, if possible, with their factor, that the fruit shall be handled in a way to keep its form and beauty. The small basket or box manner, selling box or basket with the fruit, is the best way; then having the same returned in good order and a certain sum repaid.

Fine Pears.—*Messrs. Editors:* I was somewhat surprised recently, on reading the *American Journal of Horticulture*, to find the "Edgewood farmer," a man who writes freely, if not always correctly, assert that our finer pears can not be grown with the same facility and success as the coarser and less high-flavored sorts. Without a word as to such doctrine being consonant with the *Journal* in which it appears, for the editor has not even a comment, or even a word, as to its intuitive teachings backward, I will simply say that, in my experience with over five hundred different varieties of pears, and covering over twenty years of practice, the statement has no foundation in fact. I have grown Seckels in poor soil and without cultivation, as high flavored as any ever grown by the best pomologists. I have grown Jalousie de Fontenay, Buerre d'Anjou, Buerre Superfin, Buerre Gris, Madelaine, Rostiezer, and many other sorts under high cultivation, on quince, and the same season on pear roots, and have had equally as fine-flavored fruits on one as the other. There are some men who write well, but all do not practice, and few have really thoughts connected with horticulture beyond the dollar-and-cent view. If the *Journal of Horticulture* can not advance any better views in pomology than this writer has given, it should not have countenance of any fruit-grower. Yours, Henry F.

Hardy Azaleas.—Few know the beauty of Azaleas except as they have occasionally seen them in a green-house or conservatory; once in a while we meet a man who remembers in early youth the beautiful flowers of his New England rocky dells, where and from which he gathered and eat as a boy excrescences under the name of Swamp Apples. Recently we visited a gentleman, originally from Connecticut, but now a resident in one of our Western States, where we saw a collection of Azaleas that, although not rivaling New England dells in numbers, yet excelled them all in beauty, because of the great variety of shades in color, from a light pink, almost white, to a rich red, and from a straw color to the deep yellow of *pontica*, all hardy, all growing in open ground and in no other than good light loamy garden soil. It is one of the most beautiful shrubs we have, and we hope our notice will draw attention of planters to its more general introduction.

MILDEW ON PEAS.—The London *Gardener's Magazine* says that peas can be grown free from mildew even in the hot dry weather of summer, provided trenches be made two feet deep, then a layer of manure, filled up and sown.

BOOK NOTICES.

RURAL STUDIES. By Donald G. Mitchell. New York: C. Scribner & Co., Publishers. Price $1 75.

We have received a copy of the above book from the author. It is written in his usual pleasing style, and gives many useful hints to those contemplating a residence in the country. Some of the articles contained in the work were written for and have appeared in the HORTICULTURIST from time to time. Our readers will be glad to welcome them in a collected form, together with much other matter that we believe has not before appeared in print.

APPLETON'S HAND-BOOK OF NORTHERN TRAVEL; being a guide through the Eastern, Northern, and Western States and Territories, with descriptive sketches of the principal cities and towns, and objects of interest and importance.

ANNUAL REPORT OF THE CHAMBER OF COMMERCE, NEW YORK, being a record of their proceedings for the year 1866, and containing much useful statistical information.

THE SMALL FRUIT CULTURIST. By Andrew S. Fuller. New York: Orange Judd & Co., Publishers.

To the readers of the HORTICULTURIST Mr. Fuller is well known, and in the language of one of our Western journals, it is also well known that "he writes every word from a practical knowledge of his subject." In this book we have just what we have long been wanting, a plain record of instruction in relation not only to the cultivation of small fruits, but also as to the varieties, and a record nowhere else obtainable, because all in advance of other books and up with the times. The bold sifting of varieties of the currant and raspberry show the writer working from a daily observation and culture, not from office knowledge.

AMERICAN POMOLOGY—APPLES. By Dr. John A. Warder. New York: Orange Judd & Co., Publishers. Price, $3.

The country West and East know Dr. John A. Warder, and also that for many years he has made fruits his particular study. In this work he has given us Apples only, and has performed a laborious task in a very superior manner, and made up a classification new to our fruit men, and which to pomologists may prove valuable. We have but one regret to make in his work, and that is the leaving out of synonyms or local names; but as the work swelled to over 700 pages, it perhaps was not possible to incorporate them and keep within bounds which the publisher must respect or lose money. The Apple is the great first fruit of our country, and every farmer grows them, however much he may think "pears for his heirs," or strawberries too small an affair for his time. Therefore the author has done wisely in taking for his commencement of American Pomology that fruit which is part and parcel of every household, and we trust the sale will be such as to induce him to continue in the work of well-doing, and hereafter give us pears, cherries, etc., etc.

(*From the "Working Farmer," by S. Edwards Todd, revisory editor of "Bridgeman's Am. Gardener's Asst."*)

WOODWARD'S RECORD OF HORTICULTURE. By A. S. Fuller. New York: Geo. E. & F. W. Woodward.

Twenty years ago, almost every religious society in the country was required to purchase new singing books almost every winter, "in order to keep up with the improvements of the age." Well, what pro-

gress did singers or composers make? In the first edition they had the good old stand-by tunes—Old Hundred, Mear, Wind, and Wells. In the next, appeared Wells, Mear, Windham, and Old Hundred. And the only improvement was that Old Hundred was written, first in the key of A, and then in the key of G. This is exactly the case with "Fuller's Record of Horticulture." There is nothing strictly horticultural that has not been published over and over again in the *Working Farmer* for the past ten years. S. E. T.

[That is it; buy the "Record," and you will not need the last ten volumes of the *Working Farmer*, and so far as horticulture is concerned, the next ten either.]

RECORD OF HORTICULTURE AND "INDEPENDENT" CRITICISM.—Messrs. Woodward, of the HORTICULTURIST, have put out a neat volume of 125 pages (price $1 00), called the RECORD OF HORTICULTURE. The editor is Mr. A. S. Fuller, who gives his notes on horticultural progress, reviews books, and contributes several valuable articles. The book is strongly individual, and as Mr. Fuller is a known enemy to all shams, many authors and pretenders of various kinds will feel that their toes are trodden upon. Mr. Fuller is a genuine horticultural iconoclast, and we are glad that we have at least one horticulturist who has the courage to strip off the borrowed plumes from overrated writers and over-praised fruits. He may not always be right, but he evidently means to be, and for that we honor him, and always welcome any contribution from his pen, as we are sure that it will be practical and vigorous. One of the most useful portions of this RECORD is the chapter on the propagation of Bulbs. Mr. Rand's work on Bulbs is singularly deficient in directions to the novice on the subject of propagation, and this RECORD is an almost indispensable supplement to that work. . . . The *Independent* of May 2d contains a most remarkable article on this RECORD. We do not call it criticism, out of respect to critics. The *Independent* has the reputation of being a religious paper. We occasionally read its Farmer's column—upon the principle that the deacon always read the theater bills, that he might keep posted as to what the devil was doing. After we have read the Farmer's column, we are satisfied—just as Mrs. Squeers' boy didn't want any breakfast after their brimstone and molasses—and have no desire to see what the rest of the paper may contain. The *Independent's* notice of the RECORD OF HORTICULTURE is too long, or we would reproduce it, in order that our readers might see what stuff a "religious" paper can publish, and the number of direct and inferential —what-you-may-call-'ems, that can be put into a column. Half of the article is devoted to showing that this is not a fit book for a farmer, and gives the *Independent's* views on farmers' books in general. Now, Mr. Fuller did not write this book for farmers, but for horticulturists. If he did write a book for farmers, it would not be of that character that would have to lie over a year before he could find a publisher so regardless of the good of the community as to publish it. The *Independent* says: "Well, what do we find within these pretty covers, costing $1 50 of the farmer's hard-earned money?" The price "$1 50" is within one third of the truth, which is pretty good for the *Independent*. Farther along in the article we get a clue to "what's the matter." Mr. Fuller, in his RECORD, gives a justly severe castigation to the "Reviser" of "Bridgeman's Gardener's Assistant." The *Independent* says: "As he has made some false statements in which *our* integrity is assailed, it is proper to explain the matter in this place." We, for the first time, learn that that book was revised by the *Independent*. We supposed it was done by a chap who took it as a job. Was it done by Mr. Henry C. Bowen, the "responsible man," by Theodore Tilton, or some subordinate? No clue is given in the article —the editorial "our" leaving us quite in the dark. We read: "The publisher of 'Bridgeman's Gardener' brought the wood cuts, ready made, to the reviser, before he commenced his task; a portion of the illustrations were purchased by the publisher of other publishers. The reviser had nothing to do with the illustrations, only to insert them in their proper places." Now, here is a direct statement, which must be either true or false. The publishers, Messrs. William Wood & Co., say that they know nothing of the source of at least twenty of the illustrations of of "Bridgeman's Gardener." We believe Messrs. Wood tell the truth, but then the *Independent* is a "religious" newspaper, and what does it tell? Certain cuts which appear in Bridgeman's book were originally drawn and engraved for the *Agriculturist*. We never sold, gave away, or loaned them to Messrs. Wood, who knew nothing of them until they saw them in the book, and these, certainly, were not the illustrations "purchased by the publisher of other publishers." We do not *know* how these cuts transferred themselves from the engraving-room of the *Agriculturist* to the pages of Bridgeman's book. The *Independent* calls it "purchasing;" other people have a different name for it. Mr. Fuller's statements in regard to this book are none too severe, except in the fact that they are true; but this case would show that the way to get abuse from the *Independent* is to tell the truth. The *Independent* may be gratified to learn that the publishers of "Bridgeman's Gardener's Assistant," finding that its revision of that originally excellent and useful work has been quite as severely criticised by the horticultural and agricultural press, as it has been by Mr. Fuller, in his RECORD OF HORTICULTURE, have concluded to have the work done over again. The *Independent* calls Mr. Fuller's book a book of "slanders." We have no name to apply to the paper that can so unfairly treat a valuable contribution to our horticultural literature. But then, what does the *Independent* know about horticulture?—*American Agriculturist.*